No. 889,631. PATENTED JUNE 2, 1908.

J. MURRAY.

HINGE.

APPLICATION FILED JULY 6, 1905.

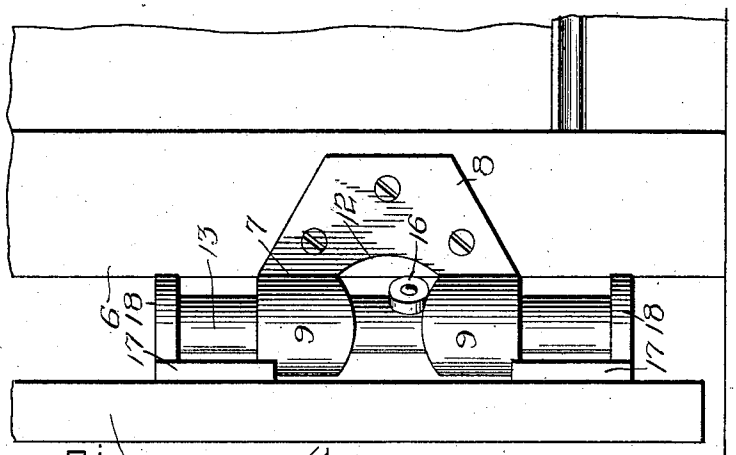


Fig. 2.

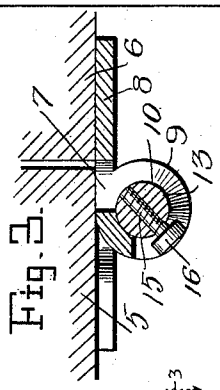


Fig. 3.

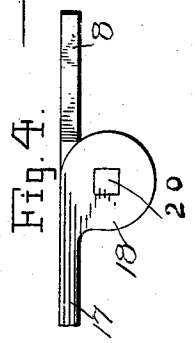


Fig. 4.

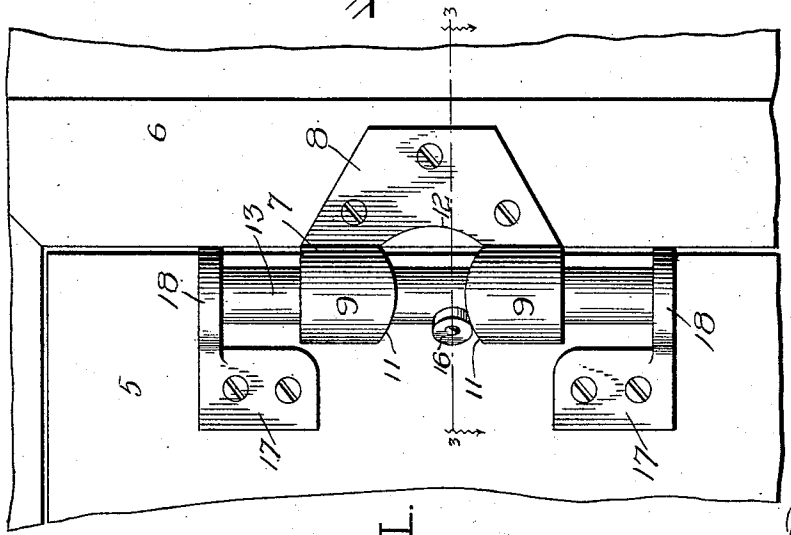


Fig. 1.

Witnesses

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No. 889,631. Specification of Letters Patent. Patented June 2, 1908.

Application filed July 6, 1905. Serial No. 268,433.

To all whom it may concern:

Be it known that I, JOHN MURRAY, a citizen of the United States, residing at Lonerock, in the county of Kossuth, State of Iowa, have invented certain new and useful Improvements in Hinges; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to hinges and more particularly to those applicable to doors or other vertically disposed and relatively heavy closures and has for its object the provision of a hinge so arranged that when in one position the door will automatically close itself and which, in another position will prevent not only the closing of the door but automatically tend to open it fully.

Another object is to provide a hinge that will be extremely simple and that may be manufactured at low cost, the arrangement of parts being also such that the hinge may be easily and quickly assembled.

Other objects and advantages will be apparent from the following specification, which describes an embodiment of the present invention.

Of the drawings, forming a portion of this specification and in which like numerals of reference indicate similar parts in the several views, Figure 1 is a side elevation of a door and door casing provided with the improved hinge, the door being represented as closed. Fig. 2 is a similar view showing the door as opened. Fig. 3 is a transverse section on line 3—3 of Fig. 1. Fig. 4 is a plan of the hinge.

Referring now with more particularity to the drawings, there is shown a door 5 and a frame 6. The improved hinge is shown as secured to the door and frame and consists of a stationary member 7 including an attaching plate 8 which is secured to the frame 6. Formed upon the attaching plate adjacent to the inner edge thereof there are a pair of vertically spaced horizontally extending knuckles or bosses 9 having alining vertical passages 10 formed therethrough and the mutually adjacent faces of these bosses converge from their outer to their inner portions, the space between the bosses thus having substantially the form of a U, the minor end of which is directed toward the free edge of the plates. Each knuckle is thus provided with a curved surface 11.

A recess 12 is formed in the plate 8 between the knuckles or bosses 9 at the inner portions of the latter.

Revolubly engaged in the passages 10 of the knuckles there is a pintle 13 having a threaded recess formed therethrough. Located between the bosses and engaged in this recess there is a screw 15 having a roller 16 revolubly mounted thereon and the pintle is slidable in the knuckles to bring this roller into engagement with either of the curved faces 11.

Plates 17 are secured to the door and have horizontally extending wings 18 provided with vertical angular openings in which are engaged the angular end portions 20 of the pintle 13 and the arrangement is such that the pintle is held normally by the weight of the door with the roller 16 upon the curved face 11 of the lower knuckle or boss 9 and at the lower portion of this curved face, it being understood that when the door is swung outwardly, this roller will move up the curved face beyond the highest point and that if the door be released, the weight thereof will move the roller down the curved face and the door will thus be closed.

The recess 12 is adapted for the reception of the roller 16 and it will be seen that the door may be moved to cause this roller to enter the recess, when, the bottom of the recess being inclined downwardly and inwardly the door will be held against return movement.

It will of course be understood that a door is provided with a suitable number of these hinges and it will be seen that the improved hinge may be used at either side of the door.

What is claimed is—

A hinge comprising, in combination, an attaching plate provided with upper and lower spaced knuckles having mutually-adjacent curved faces converging towards each other, and with a recess formed therein between the inner portions of the knuckles, said knuckles having alining passages formed therethrough, a pair of plates adapted for attachment to a door and provided with horizontally extending wings having vertical angular openings alining with the passages in

said knuckles, a pintle slidably and revolubly engaged in said passages and having angular end portions engaged in said openings, a screw engaged in the pintle between the knuckles, and a roller mounted upon the screw and located for engagement of the curved face of either knuckle, said recess having its bottom directed inwardly and downwardly into the plate for the reception of said roller.

In testimony whereof, I affix my signature, in presence of two witnesses.

JOHN MURRAY.

Witnesses:
JOHN KERR,
JOHN RATH.